

## Contents

<b>1</b>	<b>Introduction</b>	<b>38</b>
<b>2</b>	<b>Guide to Using this Manual</b>	<b>38</b>
2.1	Applicable Documentation	38
2.2	Symbols used with warnings in the text	39
2.3	Symbols in Text	39
<b>3</b>	<b>Overview</b>	<b>39</b>
3.1	STIHL FSA 90 Trimmer and Battery	39
3.2	STIHL FSA 90 R Trimmer and Battery	40
3.3	Deflectors and Cutting Attachments	41
3.4	Carrying Systems	41
3.5	Symbols	42
<b>4</b>	<b>Safety Precautions</b>	<b>42</b>
4.1	Warning Signs	42
4.2	Intended Use	43
4.3	The Operator	43
4.4	Clothing and Equipment	44
4.5	Work Area and Surroundings	45
4.6	Safe Condition	45
4.7	Operation	47
4.8	Reactive Forces	48
4.9	Transporting	49
4.10	Storing	49
4.11	Cleaning, Maintenance and Repairs	50
<b>5</b>	<b>Preparing Trimmer for Operation</b>	<b>50</b>
5.1	Preparing Trimmer for Operation	50
<b>6</b>	<b>Charging the Battery, LEDs</b>	<b>51</b>
6.1	Charging the Battery	51
6.2	Displaying State of Charge	51
6.3	LEDs on Battery	51
<b>7</b>	<b>Assembling the Trimmer</b>	<b>51</b>
7.1	Mounting the Handle	51
7.2	Mounting the Barrier Bar	52
7.3	Mounting and Removing the Deflector	52
7.4	Mounting and Removing the Mowing Head	53
7.5	Removing and Installing Metal Cutting Attachment	54
<b>8</b>	<b>Adjusting Trimmer for User</b>	<b>54</b>
8.1	Fitting and Adjusting the Carrying System	54
8.2	Balancing the Trimmer	55
8.3	Adjusting the Handle	55
<b>9</b>	<b>Removing and Fitting the Battery</b>	<b>56</b>
9.1	Fitting the Battery	56
9.2	Removing the Battery	56
<b>10</b>	<b>Switching the Trimmer On/Off</b>	<b>57</b>
10.1	Switching On	57
10.2	Switching Off	57
<b>11</b>	<b>Testing the Trimmer and Battery</b>	<b>57</b>
11.1	Checking the Controls	57
11.2	Testing the Battery	58
<b>12</b>	<b>Operating the Trimmer</b>	<b>58</b>
12.1	Holding and Controlling the Trimmer	58
12.2	Setting Power Level	59
12.3	Mowing	60
12.4	Adjusting Nylon Line	60
<b>13</b>	<b>After Finishing Work</b>	<b>60</b>
13.1	After Finishing Work	60
<b>14</b>	<b>Transporting</b>	<b>61</b>
14.1	Transporting the Trimmer	61
14.2	Transporting the Battery	61
<b>15</b>	<b>Storing</b>	<b>61</b>
15.1	Storing the Trimmer	61
15.2	Storing the Battery	62
<b>16</b>	<b>Cleaning</b>	<b>62</b>
16.1	Cleaning the Trimmer	62
16.2	Cleaning the Deflector and Cutting Attachment	62
16.3	Cleaning the Battery	62
<b>17</b>	<b>Maintenance</b>	<b>62</b>

# STIHL

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17.1 Sharpening and Balancing a Metal Cutting Attachment.....	62
<b>18 Repairing</b> .....	<b>62</b>
18.1 Repairing the Trimmer and Cutting Attachment.....	62
18.2 Servicing and Repairing the Battery.....	62
<b>19 Troubleshooting</b> .....	<b>63</b>
19.1 Troubleshooting Trimmer or Battery.....	63
<b>20 Specifications</b> .....	<b>64</b>
20.1 STIHL FSA 90, FSA 90 R Trimmers.....	64
20.2 STIHL AP battery .....	64
20.3 Noise and Vibration Data.....	64
20.4 REACH .....	65
<b>21 Combinations of Cutting Attachments, Deflectors and Carrying Systems</b> .....	<b>66</b>
21.1 Combinations of Cutting Attachments, Deflectors and Carrying Systems.....	66
<b>22 Spare Parts and Accessories</b> .....	<b>68</b>
22.1 Spare Parts and Accessories.....	68
<b>23 Disposal</b> .....	<b>68</b>
23.1 Disposing of Trimmer and Battery.....	68
<b>24 EC Declaration of Conformity</b> .....	<b>68</b>
24.1 STIHL FSA 90, FSA 90 R Trimmers.....	68

## 1 Introduction

Dear Customer,

Thank you for choosing STIHL. We develop and manufacture our quality products to meet our customers' requirements. The products are designed for reliability even under extreme conditions.

STIHL also stands for premium service quality. Our specialist dealers guarantee competent advice and instruction as well as comprehensive service support.

We thank you for your confidence in us and hope you will enjoy working with your STIHL product.



Dr. Nikolas Stihl

**IMPORTANT: READ BEFORE USE AND KEEP IN A SAFE PLACE.**

## 2 Guide to Using this Manual

### 2.1 Applicable Documentation

Local safety regulations apply.

- ▶ Read, understand and save the following documents in addition to this instruction manual:
  - Instruction manual and packaging of the cutting attachment you are using
  - Instruction manual of the carrying system you are using
  - User instructions for STIHL AR battery
  - User instructions for AP belt bag with connecting cable
  - Safety notes and precautions for STIHL AP battery
  - Instruction manual for STIHL AL 101, 300, 500 chargers

- Safety information for STIHL batteries and products with built-in batteries: [www.stihl.com/safety-data-sheets](http://www.stihl.com/safety-data-sheets)

## 2.2 Symbols used with warnings in the text

### **WARNING**

This symbol indicates dangers that can cause serious injuries or death.

- ▶ The measures indicated can avoid serious injuries or death.

### **NOTICE**

This symbol indicates dangers that can cause damage to property.

- ▶ The measures indicated can avoid damage to property.

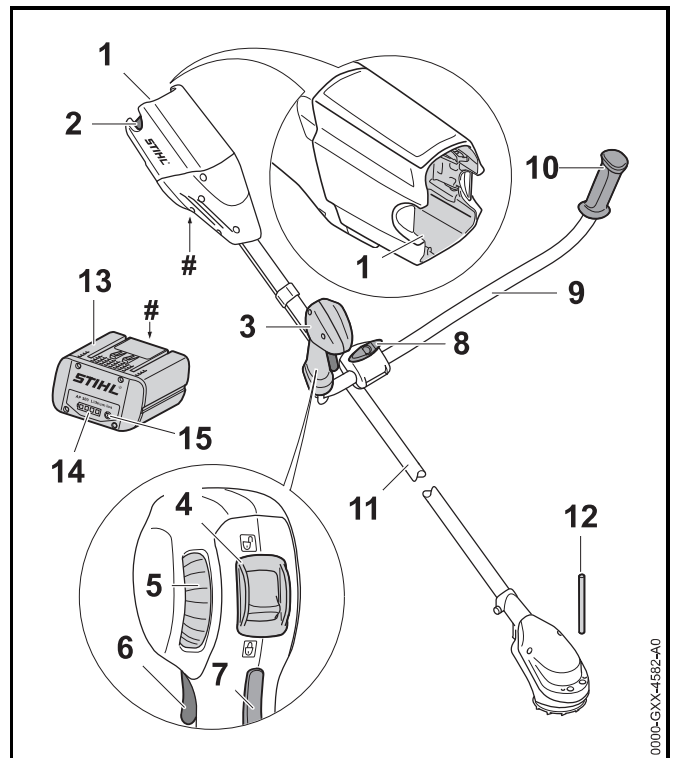
## 2.3 Symbols in Text



This symbol refers to a chapter in this instruction manual.

## 3 Overview

### 3.1 STIHL FSA 90 Trimmer and Battery



#### 1 Battery Compartment

Accommodates the battery.

#### 2 Locking Lever

Secures the battery in the battery compartment.

#### 3 Control Handle

For operating, holding and controlling the trimmer.

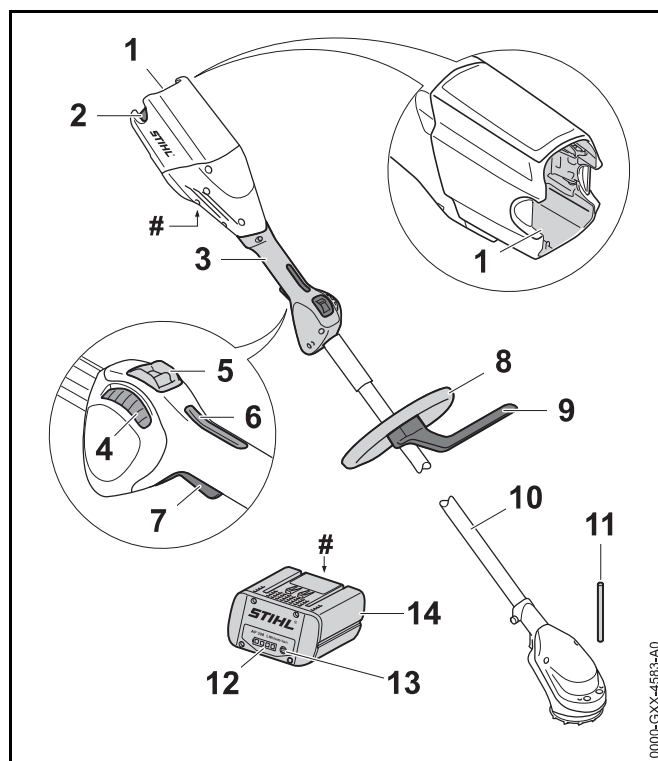
#### 4 Retaining Latch

Operated together with the trigger lockout to unlock the trigger.

- 5 Set Wheel**  
Used to select the power level.
- 6 Trigger**  
The trigger switches the motor on and off.
- 7 Trigger Lockout**  
Locks trigger in position.
- 8 Wing Screw**  
Secures the handlebar to the handle support.
- 9 Handlebar**  
Connects control handle and left grip to drive tube.
- 10 Grip**  
For holding and controlling the trimmer.
- 11 Drive Tube**  
Connects all components.
- 12 Stop Pin**  
Blocks shaft while cutting attachment is being mounted.
- 13 Battery**  
Supplies power to the trimmer.
- 14 LEDs**  
Indicate battery's state of charge and malfunctions.
- 15 Button**  
Activates the LEDs on the battery.

# Rating label with serial number

### 3.2 STIHL FSA 90 R Trimmer and Battery



- 1 Battery Compartment**  
Accommodates the battery.
- 2 Locking Lever**  
Secures the battery in the battery compartment.
- 3 Control Handle**  
For operating, holding and controlling the trimmer.
- 4 Set Wheel**  
Used to select the power level.
- 5 Retaining Latch**  
Operated together with the trigger lockout to unlock the trigger.

**6 Trigger Lockout**

Locks trigger in position.

**7 Trigger**

The trigger switches the motor on and off.

**8 Loop Handle**

For holding and controlling the trimmer.

**9 Barrier Bar**

Maintains distance between operator's leg and a metal cutting attachment.

**10 Drive Tube**

Connects all components.

**11 Stop Pin**

Blocks shaft while cutting attachment is being mounted.

**12 LEDs**

Indicate battery's state of charge and malfunctions.

**13 Button**


Activates the LEDs on the battery.

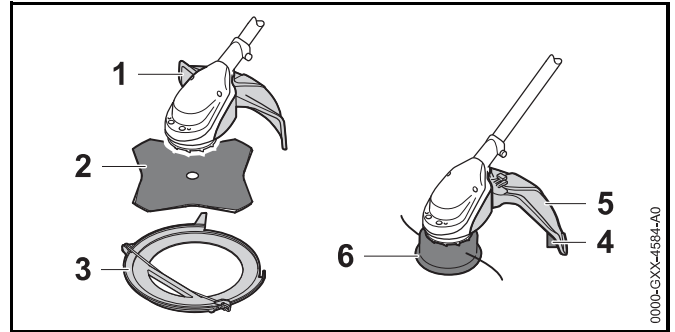
**14 Battery**

Supplies power to the trimmer.

**# Rating label with serial number**

**3.3 Deflectors and Cutting Attachments**

The illustrations show examples of deflectors and cutting attachments. Approved combinations are listed in this instruction manual,  21.



**1 Deflector for Metal Cutting Attachments**

Protects user from flying debris and contact with the metal cutting attachment.

**2 Grass Cutting Blade**

Cuts grass and weeds.

**3 Transport Guard**

Helps protect user from contact with metal cutting attachments.

**4 Deflector for Mowing Heads**

Protects user from flying debris and contact with the mowing head.


**5 Line Limiting Blade**

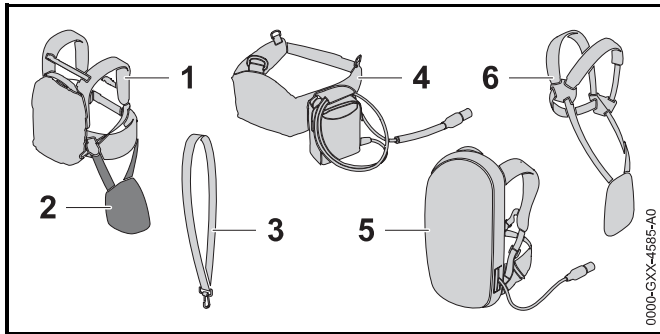
Trims surplus mowing line to correct length.

**6 Mowing Head**

The mowing head contains the mowing line.

**3.4 Carrying Systems**



The illustrations show typical examples of carrying systems. Approved combinations are listed in this instruction manual,  21.


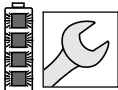

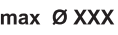






- 1 STIHL AR Battery**  
Supplies power to the trimmer.
- 2 Hip Padding**  
Serves to secure trimmer to STIHL AR battery or the carrying system with built-in "AP belt bag with connecting cable".
- 3 Shoulder Strap**  
Serves to carry the trimmer.
- 4 "AP Belt Bag with Connecting Cable"**  
Can supply power to the trimmer.
- 5 Carrying System with Built-In "AP Belt Bag with Connecting Cable"**  
Can supply power to the trimmer.
- 6 Full Harness**  
Serves to carry the trimmer.

**3.5 Symbols**

Meanings of symbols that may be on the trimmer, deflector and battery:


-  Retaining latch unlocks the trigger in this position.
-  Retaining latch locks the trigger in this position.

-  1 LED glows red. Battery too hot or too cold.
-  4 LEDs flash red. There is a malfunction in the battery.
-  This symbol shows the direction of rotation of the cutting attachment.
-  This symbol shows the maximum diameter of the cutting attachment in millimeters.
-  This symbol shows the rated speed of the cutting attachment.
-  **LWA** Guaranteed sound power level according to directive 2000/14/EC in dB(A) in order to make sound emissions of products comparable.
-  The data next to this symbol indicates the energy content of the battery according to the cell manufacturer's specification. The energy content available during operation is lower.
-  Do not dispose of the product with your household waste.

**4 Safety Precautions**

**4.1 Warning Signs**

Meanings of warning signs on the trimmer and battery:

-  Observe safety notices and take the necessary precautions.

## 4 Safety Precautions

English



Read, understand and save the instruction manual.



Wear safety glasses.



Observe safety notices on flying debris and take the necessary precautions.



Always remove the battery during work breaks, transport, storage, maintenance or repairs.



Maintain safe distance.



Protect battery from heat and fire.



Do not immerse battery in fluids.



Observe battery's specified temperature range.

### 4.2 Intended Use

The STIHL FSA 90 trimmer is designed for the following applications:

- with a mowing head: Mowing grass

- with a grass cutting blade: Mowing grass and weeds

The trimmer may be used in the rain.

The trimmer is powered by a STIHL AP battery or a STIHL AR battery.

### ⚠ WARNING

- Batteries not explicitly approved for the trimmer by STIHL may cause a fire or explosion. This can result in serious or fatal injuries and damage to property.
  - ▶ Use the trimmer with a STIHL AP battery or a STIHL AR battery.
- Using the trimmer or the battery for purposes for which they were not designed may result in serious or fatal injuries and damage to property.
  - ▶ Use the trimmer as described in this instruction manual.
  - ▶ Use the battery as described in this instruction manual or the instruction manual for the STIHL AR battery.

### 4.3 The Operator

#### ⚠ WARNING

- Users without adequate training or instruction cannot recognize or assess the risks involved in using the trimmer and battery. The user or other persons may sustain serious or fatal injuries.



- ▶ Read, understand and save the instruction manual.

- ▶ If the trimmer or battery are passed on to another person: Always give them the instruction manual.
- ▶ Make sure the user meets the following requirements:
  - The user must be rested.
  - The user must be in good physical condition and mental health to operate and work with the trimmer and battery. If the user's physical, sensory or mental

ability is restricted, he or she may work only under the supervision of or as instructed by a responsible person.

- The user is able to recognize and assess the risks involved in using the trimmer and battery.
  - The user must be of legal age or is being trained in a trade under supervision in accordance with national rules and regulations.
  - The user has received instruction from a STIHL servicing dealer or other experienced user before working with the trimmer for the first time.
  - The user must not be under the influence of alcohol, medication or drugs.
- ▶ If you have any queries: Contact a STIHL servicing dealer for assistance.

#### 4.4 Clothing and Equipment

### WARNING

- Long hair can be sucked into the trimmer during operation. This can result in serious injuries.
  - ▶ Tie up and confine long hair so that it cannot be sucked into the trimmer.
- Objects can be thrown through the air at high speed during operation. This can result in personal injury.



- ▶ Wear close-fitting safety glasses. Suitable safety glasses that have been tested and labeled in accordance with EN 166 or national standards are available from retailers.

- ▶ Wear a face shield.
- ▶ Wear long trousers made of durable material.

- Falling objects can cause head injuries.
  - ▶ If there is a danger of falling objects during operation: Wear a safety hard hat.
- Dust can be whipped up during operation: Whipped up dust can damage the respiratory passages and cause allergic reactions.
  - ▶ Wear a respirator.
- Inappropriate clothing can snag on wood, brush or the trimmer. Not wearing personal protective equipment may result in serious injury.
  - ▶ Wear snug-fitting clothing.
  - ▶ Do not wear a scarf or jewelry.
- The user can come into contact with the rotating cutting attachment during operation. This can result in serious injuries.
  - ▶ Wear footwear made of durable material.



- ▶ If you are using a metal cutting attachment: Wear steel-toed safety boots.

- ▶ Wear long trousers made of durable material.

- The user can come into contact with the cutting attachment or line limiting blade during cleaning and maintenance work. This can result in personal injury.



- ▶ Wear work gloves made of durable material.

- Wearing unsuitable footwear may cause you to slip or stumble. This can result in personal injury.
  - ▶ Wear sturdy enclosed footwear with non-slip soles.

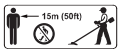


## 4.5 Work Area and Surroundings

### 4.5.1 Work Area and Surroundings

#### **⚠ WARNING**

- Bystanders, children and animals are not aware of the dangers of the trimmer or flying debris. Bystanders, children and animals may be seriously injured and damage to property may occur.



- ▶ Do not allow bystanders, children or animals within 15 meters of the work area.

- ▶ Maintain a clearance of 15 meters from objects.
  - ▶ Do not leave the trimmer unattended.
  - ▶ Make sure that children cannot play with the trimmer.
- Electrical components of the trimmer can produce sparks. Sparks may cause a fire or an explosion in an easily combustible or explosive environment. This can result in serious or fatal injuries and damage to property.
    - ▶ Do not work in an easily combustible or explosive environment.

### 4.5.2 Battery

#### **⚠ WARNING**

- Bystanders, children and animals cannot recognize or assess the dangers of the battery. Innocent children, bystanders and animals may be seriously injured.
  - ▶ Keep children, bystanders and animals away from the work area.
  - ▶ Do not leave the battery unattended.
  - ▶ Make sure that children cannot play with the battery.
- The battery is not protected against all ambient conditions. If the battery is exposed to certain ambient conditions, it may catch fire or explode. This can result in serious injuries and damage to property.



- ▶ Protect battery from heat and fire.
- ▶ Do not throw the battery into a fire.



- ▶ Use and store the battery at temperatures between -10°C and +50°C.



- ▶ Do not immerse battery in fluids.

- ▶ Keep battery away from metallic objects.
- ▶ Do not expose battery to high pressure.
- ▶ Do not expose battery to microwaves.
- ▶ Protect battery from chemicals and salts.

## 4.6 Safe Condition

### 4.6.1 Trimmer

The trimmer is in a safe condition if the following points are observed:

- The trimmer is not damaged.
- The trimmer is clean.
- The controls function properly and have not been modified.
- A combination of cutting attachment and deflector recommended in this instruction manual is mounted.
- Cutting attachment and deflector are properly mounted.
- Only original STIHL accessories designed for this trimmer are fitted.
- Accessories are properly mounted.

## **⚠ WARNING**

- If components do not comply with safety requirements, they will no longer function properly and safety devices may be rendered inoperative. This can result in serious or fatal injuries.
  - ▶ Work only with an undamaged trimmer.
  - ▶ If the trimmer is dirty: Clean the trimmer.
  - ▶ Never attempt to modify your trimmer. Exception: Mounting one of the combinations of cutting attachment and deflector recommended in this instruction manual.
  - ▶ If the controls do not function properly: Do not use your trimmer.
  - ▶ Only fit original STIHL accessories designed for this trimmer.
  - ▶ Mount the cutting attachment and deflector as described in this instruction manual.
  - ▶ Mount accessories as described in this instruction manual or the instructions supplied with the accessory.
  - ▶ Never insert objects in the trimmer's openings.
  - ▶ If you have any queries: Contact your STIHL servicing dealer for assistance.

### **4.6.2 Deflector**

The deflector is in a safe condition if the following points are observed:

- The deflector is not damaged.
- The line limiter blade is correctly installed.

## **⚠ WARNING**

- If the product does not comply with safety requirements, components will no longer function properly or safety devices may be rendered inoperative. This can result in serious injuries.
  - ▶ Work only with an undamaged deflector.
  - ▶ Work with a correctly installed line limiter blade.

- ▶ If you have any queries: Contact your STIHL servicing dealer.

### **4.6.3 Mowing Head**

The mowing head is in a safe condition if the following points are observed:

- The mowing head is not damaged.
- The mowing head is not jammed.
- The mowing lines are properly installed.

## **⚠ WARNING**

- If they are in an unsafe condition, parts of the mowing head or mowing lines may come off and be thrown at high speed. This can result in serious injuries.
  - ▶ Work only with an undamaged mowing head.
  - ▶ Never use metal elements in place of the nylon mowing lines.
  - ▶ If you have any queries: Contact your STIHL servicing dealer for assistance.

### **4.6.4 Metal Cutting Attachment**

The metal cutting attachment is in a safe condition if the following points are observed:

- Metal cutting attachment and mounting hardware are undamaged.
- Metal cutting attachment is not warped.
- Metal cutting attachment is properly mounted.
- Metal cutting attachment is correctly sharpened.
- Cutting edges of the metal cutting attachment have no burrs.

## ⚠ WARNING

- If it is not in an safe condition, parts of the metal cutting attachment may come off and be thrown at high speed. This can result in serious injuries.
  - ▶ Never work with a damaged metal cutting attachment or damaged mounting hardware.
  - ▶ Sharpen the metal cutting attachment correctly.
  - ▶ Deburr the cutting edges with a file.
  - ▶ Have the metal cutting attachment balanced by a STIHL servicing dealer.
  - ▶ If you have any queries: Contact your STIHL servicing dealer for assistance.

### 4.6.5 Battery

The battery is in a safe condition if the following points are observed:

- Battery is undamaged.
- Battery is clean and dry.
- Battery functions properly and has not been modified.

## ⚠ WARNING

- A battery that is not in a safe condition cannot operate safely. This can result in serious injuries.
  - ▶ Never work with a damaged battery.
  - ▶ Never attempt to charge a damaged or defective battery.
  - ▶ If the battery is dirty or wet: Clean the battery and allow it to dry.
  - ▶ Never attempt to modify the battery.
  - ▶ Never insert objects in the battery's openings.
  - ▶ Never bridge the battery's contacts with metallic objects (short circuit).
  - ▶ Do not open the battery.

- Fluid may escape from a damaged battery. The fluid can cause irritation if it contacts the skin or eyes.
  - ▶ Avoid contact with the fluid.
  - ▶ In case of contact with the skin: Wash affected areas with plenty of water and soap.
  - ▶ In case of contact with the eyes: Rinse eyes with plenty of water for at least 15 minutes and seek medical advice.
- A damaged or defective battery may smell unusual, emit smoke or burn. This can result in serious or fatal injuries and damage to property.
  - ▶ If the battery smells unusual or emits smoke: Do not use the battery and keep it away from combustible substances.
  - ▶ If the battery catches fire: Attempt to extinguish the battery with a fire extinguisher or water.

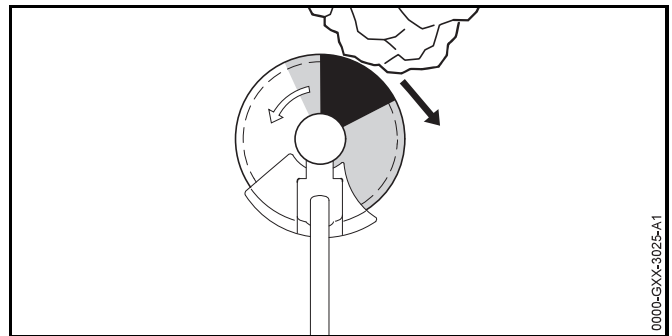
### 4.7 Operation

## ⚠ WARNING

- The user cannot concentrate on the work in certain situations. The user may stumble, fall and be seriously injured.
  - ▶ Work calmly and carefully.
  - ▶ If light and visibility are poor: Do not use your trimmer.
  - ▶ Operate the trimmer alone.
  - ▶ Keep the cutting attachment close to the ground.
  - ▶ Watch out for obstacles.
  - ▶ Stand on the ground while working and keep a good balance.
  - ▶ If you begin to feel tired: Take a break.
- The rotating cutting attachment can cut the user. This can result in serious injuries.
  - ▶ Do not touch the rotating cutting attachment.
  - ▶ If the cutting attachment is blocked by an object: Switch off the trimmer and remove the battery. Then remove the object causing the blockage.

- If the behavior of the trimmer changes during operation or feels unusual, it may no longer be in a safe condition. This can result in serious injuries and damage to property.
  - ▶ Stop work, remove the battery and contact your STIHL servicing dealer for assistance.
- Trimmer vibrations may occur during operation.
  - ▶ Wear gloves.
  - ▶ Take regular breaks.
  - ▶ If signs of circulation problems occur: Seek medical advice.
- If the cutting attachment makes contact with a foreign object during operation, the object or parts of it may be thrown at high speed. This may result in personal injuries and damage to property.
  - ▶ Clear away all foreign objects from the work area.
- If the rotating metal cutting attachment makes contact with a hard object, sparks may occur and the cutting attachment may be damaged. Sparks may cause a fire in an easily combustible location. This can result in serious or fatal injuries and damage to property.
  - ▶ Do not work in an easily combustible location.
  - ▶ Make sure the metal cutting attachment is in a safe condition.
- Note that the cutting attachment continues to rotate for a short period after you release the trigger. This can result in serious injuries.
  - ▶ Wait until the cutting attachment comes to a complete stop.
- In an emergency, the user may panic and not put the carrying system down. This can result in serious injuries.
  - ▶ Practice removing and putting down the carrying system.

#### 4.8 Reactive Forces



Kickout can be caused for the following reasons:

- The shaded area or the black area of the rotating metal cutting attachment comes into contact with a solid object and is suddenly braked.
- The rotating metal cutting attachment gets pinched in the cut.

The risk of kickout is greatest in the black area.


#### **▲ WARNING**

- These situations can abruptly decelerate or stop rotation of the cutting attachment and cause the cutting attachment to be thrown to the right or in the direction of the user (black arrow). The user can lose control of the trimmer. This can result in serious or fatal injuries.
  - ▶ Hold the trimmer firmly with both hands.
  - ▶ Use the working techniques described in this instruction manual.
  - ▶ Do not use the black area for cutting.
  - ▶ Use a combination of cutting attachment, deflector and carrying system recommended in this instruction manual.
  - ▶ Sharpen the metal cutting attachment correctly.
  - ▶ Cut with the motor running at full speed.

## 4.9 Transporting

### 4.9.1 Trimmer

#### **⚠ WARNING**

- The trimmer may turn over or shift during transport. This may result in personal injuries and damage to property.
  - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- ▶ If a metal cutting attachment is mounted: Fit the transport guard.
- ▶ Secure the trimmer with lashing straps or a net to prevent it turning over and moving.

### 4.9.2 Battery


#### **⚠ WARNING**

- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions and damage to property may occur.
  - ▶ Never transport a damaged battery.
  - ▶ Store the battery in non-conductive packaging.
- The battery may turn over or shift during transport. This may result in personal injuries and damage to property.
  - ▶ Pack the battery in packaging in such a way that it cannot move.
  - ▶ Secure the packaging so that it cannot move.

## 4.10 Storing


### 4.10.1 Trimmer

#### **⚠ WARNING**

- Children are not aware of and cannot assess the dangers of a trimmer and can be seriously injured.
  - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- ▶ Store the trimmer out of the reach of children.
- Dampness can corrode the electrical contacts on the trimmer and metal components. This can damage the trimmer.
  - ▶ Push the retaining latch into position .



- ▶ Remove the battery.

- ▶ If a metal cutting attachment is mounted: Fit the transport guard.
- ▶ Store the trimmer in a clean and dry condition.

### 4.10.2 Battery


#### **⚠ WARNING**

- Children are not aware of and cannot assess the dangers of the battery and can be seriously injured.
  - ▶ Store the battery out of the reach of children.
- The battery is not protected against all ambient conditions. The battery may be damaged if it is exposed to certain ambient conditions.
  - ▶ Store the battery in a clean and dry condition.
  - ▶ Store the battery in a confined space.

- ▶ Store the battery separately from the trimmer and charger.
- ▶ Store the battery in non-conductive packaging.
- ▶ Use and store the battery at temperatures between -10°C and +50°C.

#### 4.11 Cleaning, Maintenance and Repairs

### **⚠ WARNING**

- The trimmer may start unintentionally if the battery is left in place during cleaning, maintenance or repair operations. This can result in serious injuries and damage to property.
  - ▶ Push the retaining latch into position .



- ▶ Remove the battery.


















- Aggressive cleaning agents, a water jet or pointed objects can damage the trimmer, deflector, cutting attachment and the battery. If the trimmer, deflector, cutting attachment or battery are not cleaned correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious injuries.
  - ▶ Clean the trimmer, deflector, cutting attachment and battery as described in this instruction manual.
- If the trimmer, deflector, cutting attachment or battery are not serviced or repaired correctly, components may no longer function properly or safety devices may be rendered inoperative. This can result in serious or fatal injuries.
  - ▶ Do not attempt to service or repair the trimmer, deflector, cutting attachment or battery.
  - ▶ If the trimmer, deflector, cutting attachment or battery require servicing or repairs: Contact your STIHL servicing dealer for assistance.

- ▶ Maintain the cutting attachment as described in the instructions supplied with the cutting attachment being used or on the cutting attachment's packaging.

## 5 Preparing Trimmer for Operation

### 5.1 Preparing Trimmer for Operation

Perform the following steps before starting work:

- ▶ Make sure the following components are in a safe condition:
  - Trimmer,  4.6.1.
  - Deflector,  4.6.2.
  - Mowing head or metal cutting attachment,  4.6.3 or  4.6.4.
  - Battery,  4.6.5.
- ▶ Check the battery,  11.2.
- ▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.
- ▶ Clean the trimmer,  16.1.
- ▶ Mount the handle,  7.1.
- ▶ Select combination of cutting attachment, deflector and carrying system,  21.
- ▶ Mount the deflector,  7.3.1.
- ▶ If a metal cutting attachment is used on a loop-handled trimmer: Mount the barrier bar,  7.2.
- ▶ Mount mowing head or metal cutting attachment,  7.4.1 or  7.5.1.
- ▶ Fit and adjust the carrying system,  8.1.
- ▶ Balance the trimmer,  8.2.
- ▶ Adjust the handle,  8.3.
- ▶ Check the controls,  11.1.
  - ▶ If 3 LEDs flash red while you are checking the controls: Remove the battery and contact your STIHL dealer for assistance. There is a malfunction in the trimmer.

- ▶ If you cannot carry out this work: Do not use your trimmer and contact your STIHL dealer for assistance.

- ▶ If the LEDs glow or flash red: Troubleshooting, 19. Malfunction in trimmer or battery.

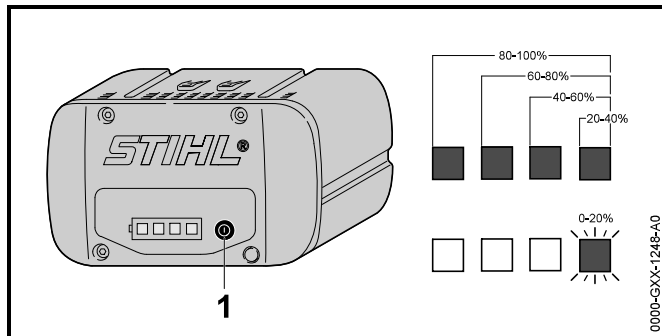
## 6 Charging the Battery, LEDs

### 6.1 Charging the Battery

The charging time depends on several factors, e.g. temperature of the battery or the ambient temperature. The actual charging time may differ from the specified charging time. For specified charging times see [www.stihl.com/charging-times](http://www.stihl.com/charging-times).

- ▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.

### 6.2 Displaying State of Charge



- ▶ Press the button (1).  
The LEDs (5) glow green for about 5 seconds and indicate the state of charge.
- ▶ If the LED on the right flashes green: Charge the battery.

### 6.3 LEDs on Battery

The LEDs can show the state of charge or malfunctions. The LEDs can glow or flash green or red.

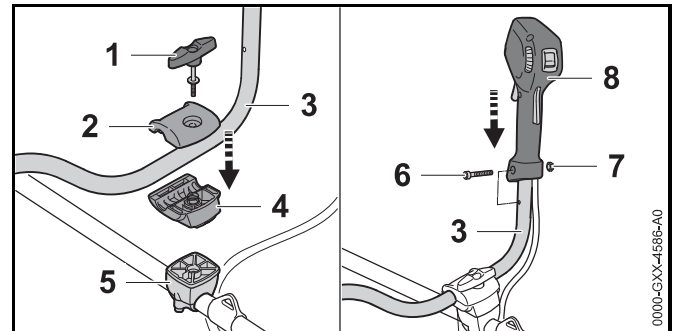
The state of charge is indicated when the LEDs glow or flash green.

## 7 Assembling the Trimmer

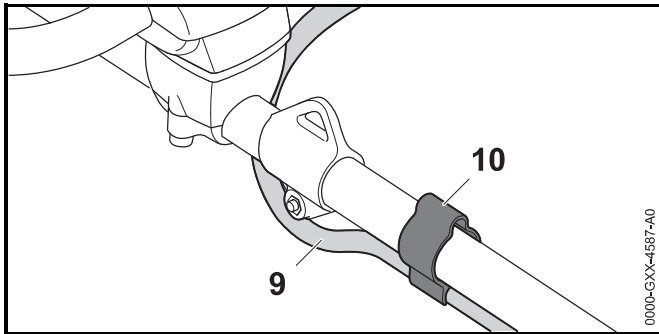
### 7.1 Mounting the Handle

#### FSA 90

- ▶ Switch off the trimmer, push retaining latch to position and remove the battery.




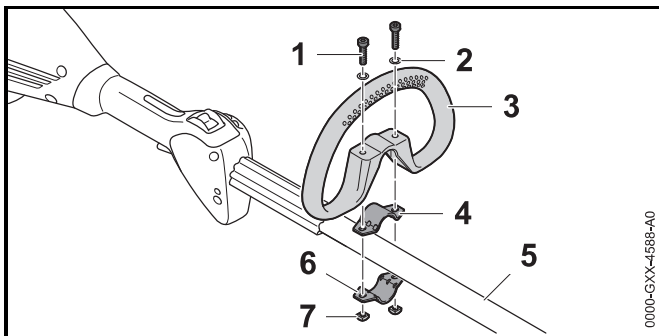
- ▶ Remove the wing screw (1).
- ▶ Remove the upper clamp molding (2).
- ▶ Place the handlebar (3) in the lower clamp molding (4).
- ▶ Fit the upper clamp (2).
- ▶ Insert the wing screw (1).
- ▶ Swing the handlebar (3) up.
- ▶ Tighten down the wing screw (1).
- ▶ Take out the screw (6).
- ▶ Position the control handle (7) on the handlebar (3), trigger facing the gearbox, and line up the hole in the control handle with the hole in the handlebar.
- ▶ Fit the nut (7).
- ▶ Insert and tighten down the screw (6) firmly.



- ▶ Push the tube (9) into the retainer (10). The bike handle (2) need not be removed again.

**FSA 90 R**


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

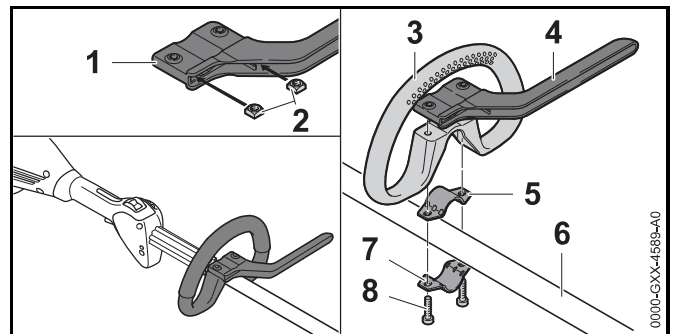


- ▶ Fit the clamp (4) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (4) on the drive tube (5).
- ▶ Fit washers (2) on the screws (1).
- ▶ Hold the clamp (6) against the drive tube (5).
- ▶ Insert screws (1) through holes in loop handle (3) and clamps (4 and 6).
- ▶ Fit and tighten down the nuts (7) firmly.

**7.2 Mounting the Barrier Bar**

The barrier bar can only be mounted in combination with the loop handle.


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



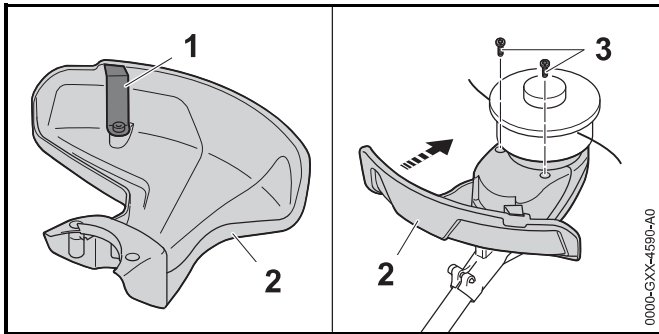
- ▶ Insert nuts (2) in the barrier bar (1) so that the holes line up.
- ▶ Fit the clamp (5) in the loop handle (3).
- ▶ Place the loop handle (3) with clamp (5) and barrier bar (4) on the drive tube (6).
- ▶ Hold the clamp (7) against the drive tube (6).
- ▶ Insert and tighten down the screws (8) firmly.

**7.3 Mounting and Removing the Deflector**

**7.3.1 Mounting the Deflector**

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



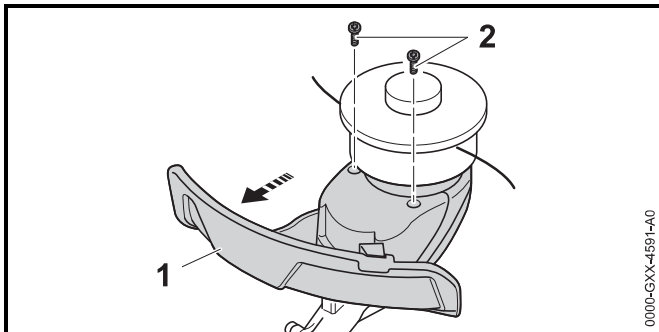


The line limiting blade (1) is already installed in the deflector (2) and must not be removed.

- ▶ Push the deflector (2) into the guides on the housing as far as stop. The deflector (2) is tight against the housing.
- ▶ Insert and tighten down the screws (3) firmly.

**7.3.2 Removing the Deflector**

- ▶ Switch off the trimmer, push retaining latch to position and remove the battery.

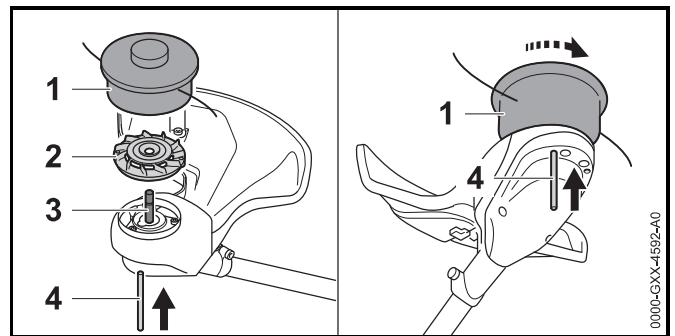


- ▶ Take out the screws (2).
- ▶ Pull off the deflector (1).

**7.4 Mounting and Removing the Mowing Head**

**7.4.1 Mounting the Mowing Head**

- ▶ Switch off the trimmer, push retaining latch to position and remove the battery.




- ▶ Fit the fanwheel (2) on the shaft (3) with fan blades facing up.
- ▶ Fit the mowing head (1) on the shaft (3) and turn it counterclockwise.
- ▶ Insert the stop pin (4) in the bore as far as stop and hold it depressed.
- ▶ Rotate the mowing head (1) counterclockwise until the stop pin (4) engages in position. The shaft is now blocked.
- ▶ Tighten down the mowing head (1) firmly by hand.
- ▶ Remove the stop pin (4).

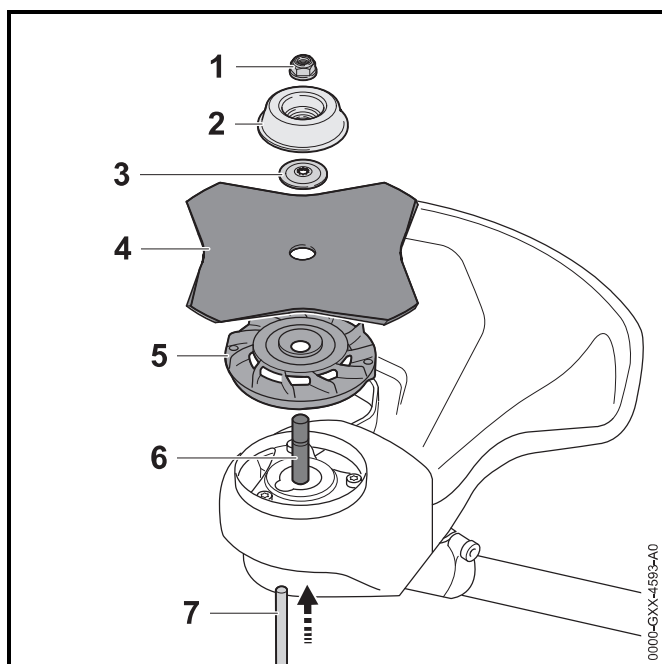
**7.4.2 Removing the Mowing Head**

- ▶ Switch off the trimmer, push retaining latch to position and remove the battery.
- ▶ Insert the stop pin in the bore as far as stop and hold it depressed.
- ▶ Rotate the mowing head (3) until the stop pin engages in position. The shaft is now blocked.
- ▶ Unscrew the mowing head clockwise.
- ▶ Remove the fanwheel.
- ▶ Remove stop pin.

## 7.5 Removing and Installing Metal Cutting Attachment

### 7.5.1 Mounting Metal Cutting Attachment


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



- ▶ Fit the fanwheel (5) on the shaft (6) with fan blades facing up.
- ▶ Place the cutting attachment (4) on the fanwheel (5). If you are fitting a circular saw blade or a grass cutting blade with more than 4 cutting edges: Its cutting edges must face in the same direction as the arrow on the deflector.
- ▶ Place the thrust washer (3) on the metal cutting attachment (4) so that its raised side faces up.
- ▶ Place the rider plate (2) on the thrust washer (3) so that its closed side faces up.
- ▶ Insert the stop pin (7) in the bore as far as stop and hold it depressed.

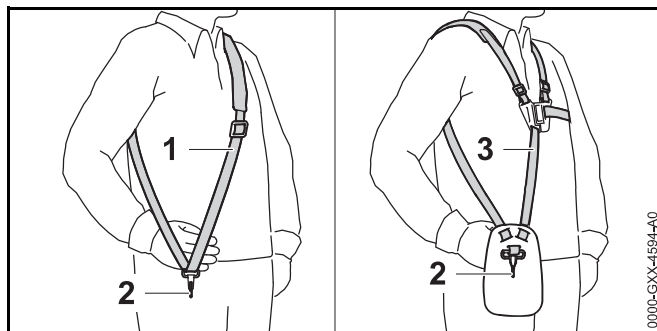
- ▶ Rotate the metal cutting attachment (4) clockwise until the stop pin (7) engages in position. The shaft (6) is now blocked.
- ▶ Fit the nut (1) counterclockwise and tighten it down firmly.
- ▶ Remove the stop pin (7).

### 7.5.2 Removing the Metal Cutting Attachment

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Insert the stop pin in the bore as far as stop and hold it depressed.
- ▶ Rotate the metal cutting attachment clockwise until the stop pin engages in position. The shaft is now blocked.
- ▶ Unscrew the mounting nut clockwise.
- ▶ Remove the rider plate, thrust washer, metal cutting attachment and fanwheel.
- ▶ Remove stop pin.

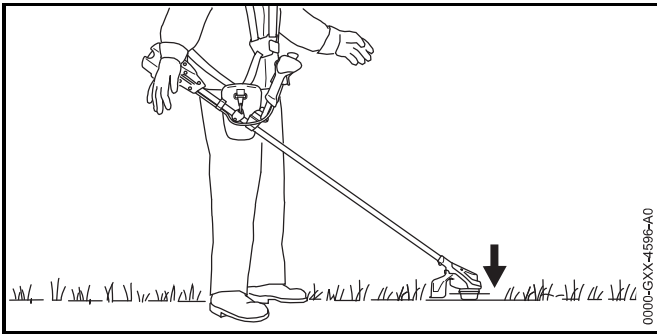
## 8 Adjusting Trimmer for User

### 8.1 Fitting and Adjusting the Carrying System




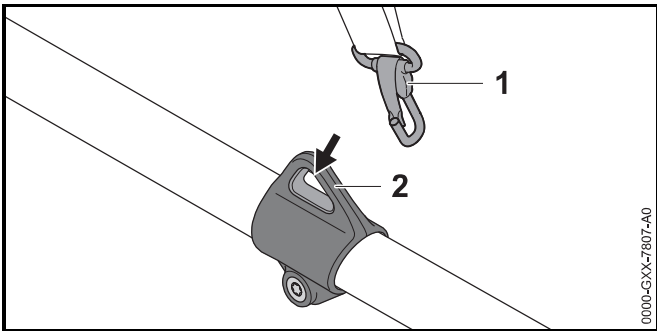
- ▶ Put on the shoulder strap (1) or full harness (3).
- ▶ Adjust the shoulder strap (1) or full harness (3) so that the carabiner (2) is about a hand's width below your right hip.

### 8.2 Balancing the Trimmer



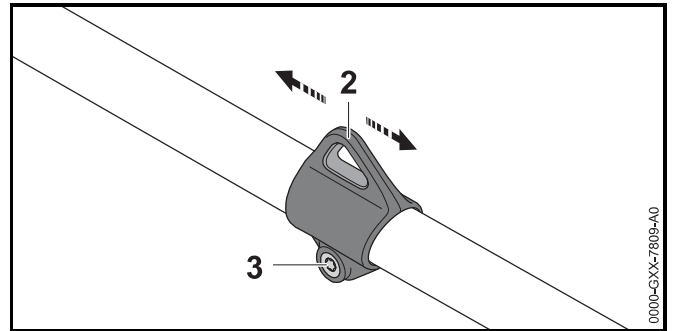
The cutting attachment should rest lightly on the ground.

- ▶ Switch off the trimmer and push retaining latch to position .



- ▶ Connect the carrying ring (1) to the carabiner (2).
- ▶ Wait for the trimmer to stop swinging.

Check position of cutting attachment. If it needs adjustment:




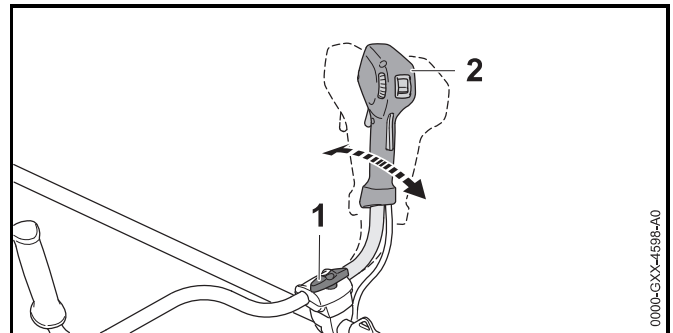
- ▶ Loosen the screw (3).
- ▶ Move carrying ring (2) up or down the drive tube until correct balanced position is reached.
- ▶ Tighten down the screw (3) firmly.

### 8.3 Adjusting the Handle

#### FSA 90

The bike handle can be set to different positions to suit the height and reach of the user.


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.

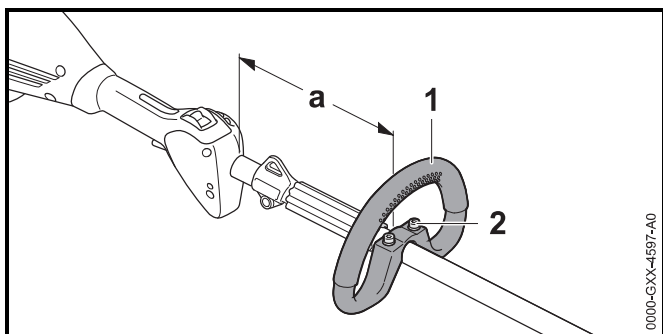


- ▶ Loosen the wing screw (1).
- ▶ Swing the bike handle (2) to the required position.
- ▶ Tighten down the wing screw (1) firmly.

**FSA 90 R**

The loop handle can be set to different positions to suit the height and reach of the user.

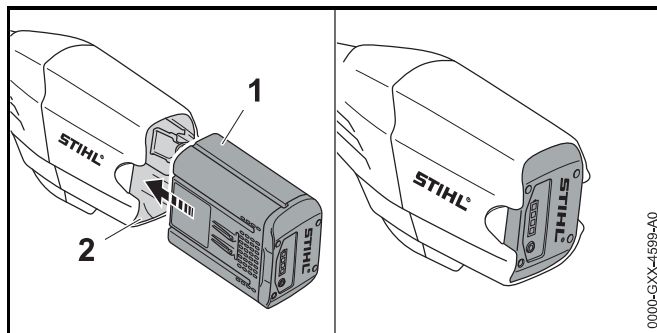
- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.



- ▶ Loosen the screws (2).
- ▶ Move the loop handle (1) to the required position and make sure that:
  - If you are using a mowing head: a = no more than 30 cm
  - If you are using a metal cutting attachment: a = no more than 25 cm
- ▶ Tighten down the screws (2) so that the loop handle cannot be rotated on the drive tube.

**9 Removing and Fitting the Battery**

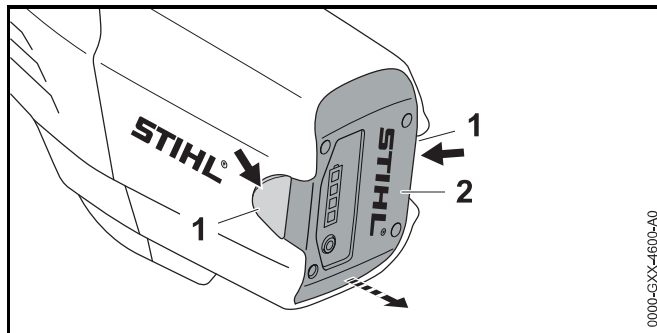
**9.1 Fitting the Battery**



- ▶ Push the battery (1) into the battery compartment (2) as far as stop. The battery (1) engages in position with a click.

**9.2 Removing the Battery**

- ▶ Stand the trimmer on a level surface.
- ▶ Hold one hand in front of the battery compartment to ensure the battery (2) does not fall out.



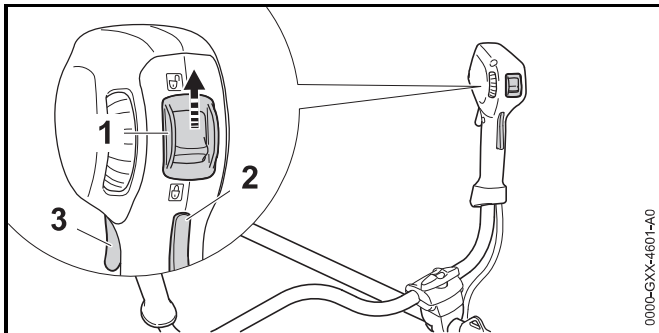
- ▶ Press both locking levers (1). The battery (2) is unlocked and can be removed.


## 10 Switching the Trimmer On/Off

### 10.1 Switching On

#### FSA 90

- ▶ Hold the trimmer firmly with your right hand on the control handle – wrap your thumb around the handle.
- ▶ Hold the trimmer firmly with your the left hand on the left handle – wrap your thumb around the handle.

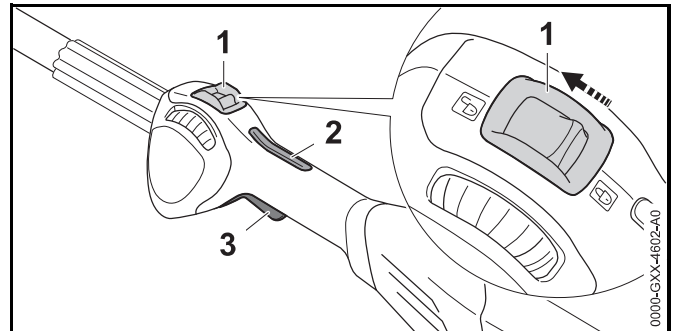



- ▶ Push the retaining latch (1) with your thumb to position .
- ▶ Depress the trigger lockout (2) with your hand and hold it there.
- ▶ Pull the trigger (3) with your index finger and hold it there. The motor accelerates and the cutting attachment rotates.

The speed of the cutting attachment is controlled with the trigger.


#### FSA 90 R

- ▶ Hold the trimmer firmly with one hand on the control handle – wrap your thumb around the handle.
- ▶ Hold the trimmer firmly with the other hand on the loop handle – wrap your thumb around the handle.



- ▶ Push the retaining latch (1) with your thumb to position .
- ▶ Depress the trigger lockout (2) with your hand and hold it there.
- ▶ Pull the trigger (3) with your index finger and hold it there. The motor accelerates and the cutting attachment rotates. The speed of the cutting attachment is controlled with the trigger.


### 10.2 Switching Off


- ▶ Release the trigger and trigger lockout lever.
- ▶ Wait for the cutting attachment to come to a standstill.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL servicing dealer for assistance. The trimmer has a malfunction.
- ▶ Push the retaining latch into position .

## 11 Testing the Trimmer and Battery

### 11.1 Checking the Controls

#### Trigger lockout lever and trigger

- ▶ Remove the battery.
- ▶ Push the retaining latch into position .
- ▶ Attempt to pull the trigger without depressing the lockout lever.

- ▶ If the trigger can be pulled: Do not use your trimmer and contact your STIHL dealer for assistance. Retaining latch or trigger lockout is faulty.
- ▶ Push the retaining latch into position .
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger.
- ▶ Release the trigger and trigger lockout lever.
- ▶ If the trigger or trigger lockout is stiff or does not spring back to the idle position: Do not use your trimmer and contact your STIHL dealer for assistance. Trigger or trigger lockout is faulty.

### Switching On

- ▶ Fit the battery.
- ▶ Depress the trigger lockout lever and hold it in that position.
- ▶ Pull the trigger and hold it there. The cutting attachment rotates.
- ▶ If 3 LEDs on the battery flash red: Remove the battery and contact your STIHL dealer for assistance. There is a malfunction in the trimmer.
- ▶ Release the trigger and trigger lockout lever. The cutting attachment comes to a standstill.
- ▶ If the cutting attachment continues to rotate: Remove the battery and contact your STIHL dealer for assistance. The trimmer has a malfunction.

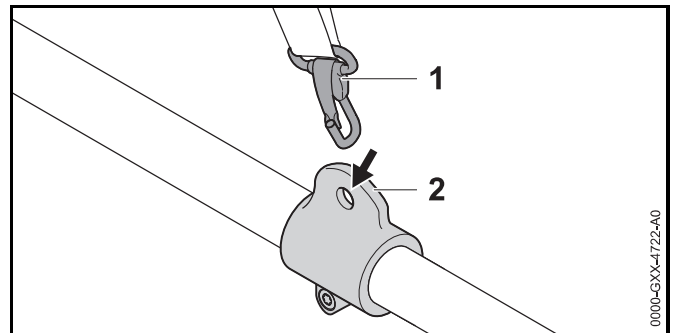
### 11.2 Testing the Battery

- ▶ Press button on battery. The LEDs glow or flash.
- ▶ If the LEDs do not glow or flash: Do not use the battery and contact your STIHL servicing dealer. There is a malfunction in the battery.

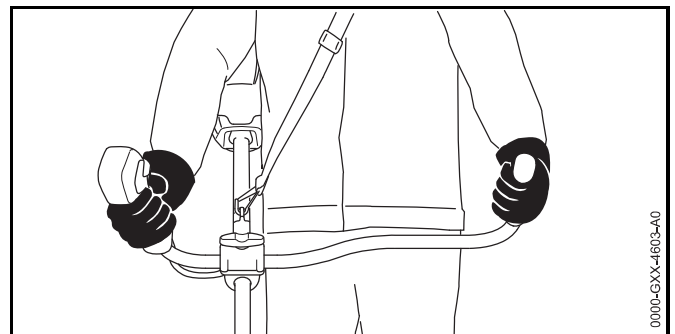
## 12 Operating the Trimmer

### 12.1 Holding and Controlling the Trimmer

#### FSA 90

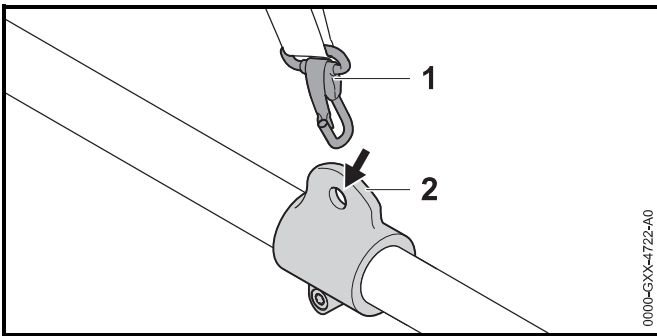


- ▶ Connect the carrying ring (2) to the carabiner (1).



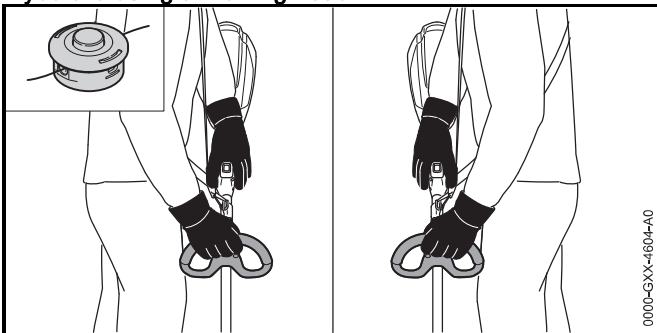
- ▶ Hold the trimmer with your right hand on the control handle – wrap your thumb around the control handle.
- ▶ Hold the trimmer with your the left hand on the left grip – wrap your thumb around the left grip.

**FSA 90 R**



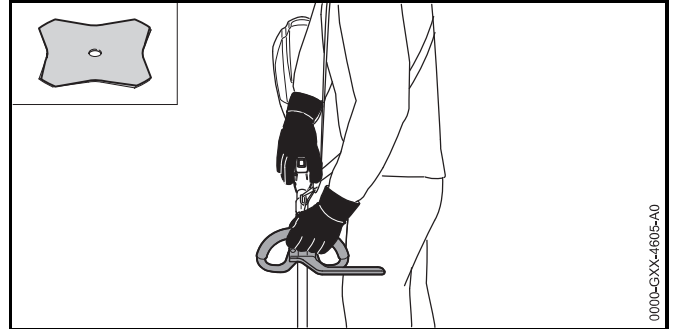
- ▶ Connect the carrying ring (2) to the carabiner (1).

**If you are using a mowing head:**



- ▶ Hold the trimmer with one hand on the control handle – wrap your thumb around the control handle.
- ▶ Hold the trimmer with your other hand on the loop handle – wrap your thumb around the loop handle.

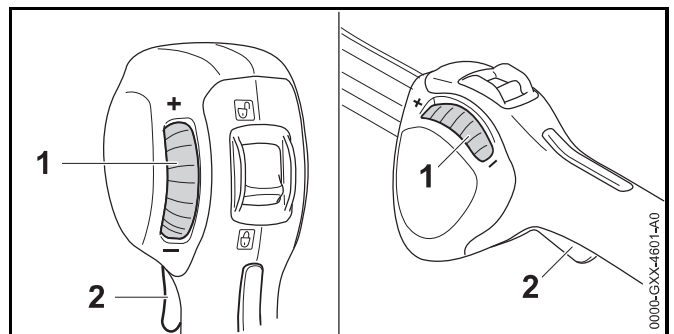
**If you are using a metal cutting attachment:**



- ▶ Hold the trimmer with your right hand on the control handle – wrap your thumb around the control handle.
- ▶ Hold the trimmer with your left hand on the loop handle – wrap your thumb around the loop handle.

**12.2 Setting Power Level**

The power level is infinitely variable to suit the application. The higher the power level, the faster the cutting attachment can run. The selected power level affects the battery's runtime. The lower the power level, the longer the battery's runtime.



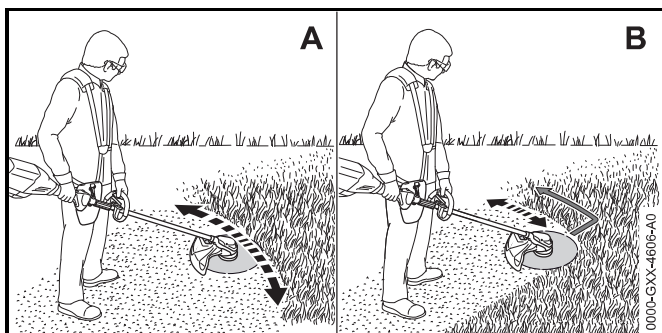
Turning the set wheel (1) in the minus ('-') direction reduces the trigger's travel. The power level is lower. The cutting attachment rotates at a lower RPM.

Turning the set wheel (1) in the plus ('+') direction increases the trigger's travel. The power level is higher. The cutting attachment rotates at a higher RPM.

- ▶ Turn the set wheel (1) to the required position.

### 12.3 Mowing

The cutting height is determined by the distance of the cutting attachment from the ground.

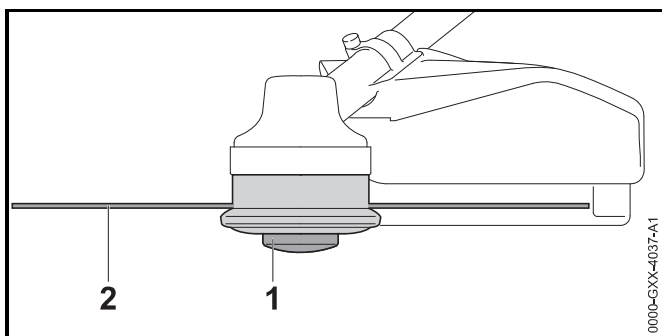


- ▶ Swing the trimmer back and forth in an arc (A).
- ▶ If you are using a metal cutting attachment: Mow with the left-hand side on the metal cutting attachment (B).
- ▶ Walk slowly and steadily forwards.


### 12.4 Adjusting Nylon Line

#### 12.4.1 Line Feed on AutoCut Mowing Head

- ▶ Tap the rotating mowing head on the ground. About 30 mm of fresh nylon line is advanced. The line limiting blade in the deflector trims the mowing lines to the correct length.




Automatic feed will not take place if the mowing lines are shorter than 25 mm.

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Depress the spool (1) on the mowing head and hold it depressed.
- ▶ Pull out the mowing lines (2).
- ▶ If the mowing lines (2) cannot be pulled out to the required length: Replace the spool (1) or the mowing lines (2). The spool is empty.

#### 12.4.2 Line Feed on SuperCut Mowing Head


Mowing lines are advanced automatically. The line limiting blade in the deflector trims the mowing lines to the correct length.

Automatic feed will not take place if the mowing lines are shorter than 40 mm.

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Pull out the mowing lines.
- ▶ If the mowing lines cannot be pulled out to required length: Replace nylon line. The spool is empty.

## 13 After Finishing Work

### 13.1 After Finishing Work


- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If the trimmer is wet: Allow the trimmer to dry.
- ▶ If the battery is wet: Allow the battery to dry.
- ▶ Clean the trimmer.
- ▶ Clean the deflector.
- ▶ Clean the cutting attachment.
- ▶ Clean the battery.



- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.

## 14 Transporting

### 14.1 Transporting the Trimmer

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.
- ▶ Carry the trimmer properly balanced by the shaft with the cutting attachment behind you.
- ▶ Transporting the trimmer in a vehicle: Secure the trimmer to prevent turnover and movement.

### 14.2 Transporting the Battery

- ▶ Switch off the trimmer and remove the battery.
- ▶ Make sure the battery is in a safe condition.
- ▶ Observe the following points when packing the battery:
  - The packaging must be non-conductive.
  - Make sure the battery cannot shift inside the packaging.
- ▶ Secure the packaging so that it cannot move.


The battery is subject to the requirements for the transport of dangerous goods. The battery is classified as UN 3480 (lithium-ion batteries) and has been tested in accordance with UN Manual of Tests and Criteria, Part III, sub-section 38.3.

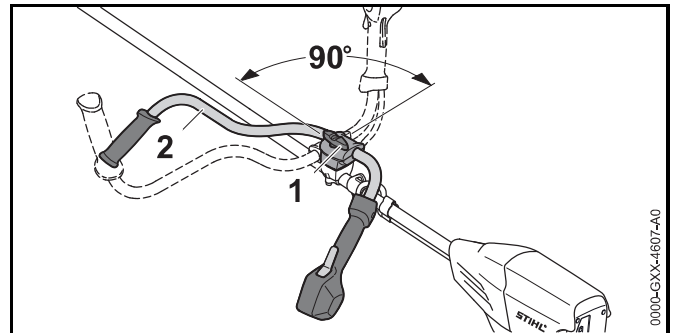
For transport regulations see [www.stihl.com/safety-data-sheets](http://www.stihl.com/safety-data-sheets)

## 15 Storing

### 15.1 Storing the Trimmer


#### FSA 90

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.



- ▶ Loosen the wing screw (1) and unscrew it until the handlebar (2) can be rotated.
- ▶ Turn the handlebar (2) through 90° and fold it down.
- ▶ Tighten down the wing screw (1) firmly.
- ▶ Observe the following points when storing the trimmer:
  - The trimmer is out of the reach of children.
  - The trimmer is clean and dry.
- ▶ If you store the trimmer for more than 3 months: Remove the cutting attachment.

#### FSA 90 R

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ If a metal cutting attachment is mounted: Fit the matching transport guard.
- ▶ Observe the following points when storing the trimmer:

- The trimmer is out of the reach of children.
- The trimmer is clean and dry.
- ▶ If you store the trimmer for more than 3 months: Remove the cutting attachment.


### 15.2 Storing the Battery

STIHL recommends that you store the battery with a charge between 40 % and 60 % (2 LEDs glow green).


- ▶ Observe the following points when storing the battery:
  - Battery is out of the reach of children.
  - Battery is clean and dry.
  - Battery is in an enclosed space.
  - Store the battery separately from the trimmer and charger.
  - Battery is in non-conductive packaging.
  - Battery is in a temperature range between -10°C and +50°C.

## 16 Cleaning

### 16.1 Cleaning the Trimmer

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Clean the trimmer with a damp cloth.
- ▶ Remove foreign matter from the battery compartment and clean the battery compartment with a damp cloth.
- ▶ Clean electrical contacts in the battery compartment with a soft brush.

### 16.2 Cleaning the Deflector and Cutting Attachment

- ▶ Switch off the trimmer, push retaining latch to position  and remove the battery.
- ▶ Clean the deflector and cutting attachment with a damp cloth or a soft brush.

### 16.3 Cleaning the Battery

- ▶ Clean the battery with a damp cloth.

## 17 Maintenance

### 17.1 Sharpening and Balancing a Metal Cutting Attachment

Correctly sharpening and balancing metal cutting attachments requires a lot of practice.

STIHL recommends you have metal cutting attachments resharpened and balanced by a STIHL servicing dealer.

- ▶ Sharpen the metal cutting attachment as described in the instructions and on the packaging supplied with the cutting attachment you are using.

## 18 Repairing

### 18.1 Repairing the Trimmer and Cutting Attachment

The trimmer and cutting attachment cannot be repaired by the user.

- ▶ If the trimmer or cutting attachment is damaged: Do not use your trimmer or cutting attachment and contact your STIHL servicing dealer.

### 18.2 Servicing and Repairing the Battery

The battery requires no servicing and cannot be repaired.

- ▶ If the battery has a malfunction or is damaged: Replace the battery.

## 19 Troubleshooting

### 19.1 Troubleshooting Trimmer or Battery

Condition	LEDs on Battery	Cause	Remedy
Trimmer does not start when switched on.	1 LED flashes green.	Battery has low charge.	<ul style="list-style-type: none"> <li>▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.</li> </ul>
	1 LED glows red.	Battery too hot or too cold.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Allow battery to cool down / warm up.</li> </ul>
	3 LEDs flash red.	There is a malfunction in the trimmer.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Clean contacts in battery compartment.</li> <li>▶ Fit the battery.</li> <li>▶ Switch on the trimmer.</li> <li>▶ If 3 LEDs continue to flash red: Do not use your trimmer and contact your STIHL dealer for assistance.</li> </ul>
	3 LEDs glow red.	Trimmer is too hot.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Allow trimmer to cool down.</li> </ul>
	4 LEDs flash red	There is a malfunction in the battery.	<ul style="list-style-type: none"> <li>▶ Remove battery and insert it again.</li> <li>▶ Switch on the trimmer.</li> <li>▶ If 4 LEDs continue to flash red: Do not use the battery and contact your STIHL dealer for assistance.</li> </ul>
		No electrical contact between trimmer and battery.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Clean contacts in battery compartment.</li> <li>▶ Fit the battery.</li> </ul>
		Trimmer or battery damp.	<ul style="list-style-type: none"> <li>▶ Allow trimmer or battery to dry.</li> </ul>
Trimmer cuts out during operation.	3 LEDs glow red.	Trimmer is too hot.	<ul style="list-style-type: none"> <li>▶ Remove the battery.</li> <li>▶ Allow trimmer to cool down.</li> </ul>
		There is a electrical malfunction.	<ul style="list-style-type: none"> <li>▶ Remove battery and insert it again.</li> <li>▶ Switch on the trimmer.</li> </ul>
Trimmer runtime is too short.		Battery not fully charged.	<ul style="list-style-type: none"> <li>▶ Recharge the battery fully as described in the instruction manual for the STIHL AL 101, 300, 500 chargers.</li> </ul>
		Normal battery life has been exceeded.	<ul style="list-style-type: none"> <li>▶ Replace the battery.</li> </ul>

## 20 Specifications

### 20.1 STIHL FSA 90, FSA 90 R Trimmers

#### FSA 90

- Approved batteries:
  - STIHL AP
  - STIHL AR
- Weight without battery, cutting attachment and deflector: 3.2 kg
- Length without cutting attachment: 1774 mm

#### FSA 90 R

- Approved batteries:
  - STIHL AP
  - STIHL AR
- Weight without battery, cutting attachment and deflector: 2.8 kg
- Length without cutting attachment: 1774 mm

For battery life see [www.stihl.com/battery-life](http://www.stihl.com/battery-life).

### 20.2 STIHL AP battery

- Battery Technology: Lithium-ion
- Voltage: 36 V
- Capacity in Ah: see rating label
- Energy content in Wh: see rating label
- Weight in kg: see rating label
- Permissible temperature range for operation and storage: -10°C to +50°C

### 20.3 Noise and Vibration Data

K-value (uncertainty) for sound pressure level is 2 dB(A). K-value (uncertainty) for sound power level is 2 dB(A). K-value (uncertainty) for vibration level is 2 m/s<sup>2</sup>.

#### FSA 90

STIHL recommends that you wear hearing protection.

Using with a mowing head:

- Sound pressure level  $L_{pA}$  measured according to EN 50636-2-91: 83 dB(A)
- Sound power level  $L_{WA}$  measured according to EN 50636-2-91: 92 dB(A)
- Vibration level  $a_{hv}$  measured according to EN 50636-2-91
  - Control handle: 3.5 m/s<sup>2</sup>.
  - Left handle: 3.5 m/s<sup>2</sup>

Using with a metal cutting attachment:

- Sound pressure level  $L_{pA}$  measured according to EN 50636-2-91: 73 dB(A)
- Sound power level  $L_{WA}$  measured according to EN 50636-2-91: 84 dB(A)
- Vibration level  $a_{hv}$  measured according to EN 50636-2-91
  - Control handle: 1.0 m/s<sup>2</sup>.
  - Left handle: 1.0 m/s<sup>2</sup>

#### FSA 90 R

STIHL recommends that you wear hearing protection.

Using with a mowing head:

- Sound pressure level  $L_{pA}$  measured according to EN 50636-2-91: 83 dB(A)
- Sound power level  $L_{WA}$  measured according to EN 50636-2-91: 92 dB(A)
- Vibration level  $a_{hv}$  measured according to EN 50636-2-91
  - Control handle: 3.5 m/s<sup>2</sup>.

## 20 Specifications

- Left handle: 4.8 m/s<sup>2</sup>

Using with a metal cutting attachment:

- Sound pressure level  $L_{pA}$  measured according to EN 50636-2-91: 73 dB(A)
- Sound power level  $L_{wA}$  measured according to EN 50636-2-91: 84 dB(A)
- Vibration level  $a_{hv}$  measured according to EN 50636-2-91
  - Control handle: 1.4 m/s<sup>2</sup>.
  - Left handle: 1.4 m/s<sup>2</sup>

The vibration values quoted above have been measured according to a standardized test procedure and may be used to compare electric power tools. Depending on the type of usage, the vibrations that actually occur may differ from the values quoted. The vibration values quoted may be used for an initial assessment of the user's exposure to vibrations. The actual exposure to vibrations has to be estimated. This process may also take into account times during which the electric power tool is switched off and times during which it is switched on but running off load.

Information on compliance with Vibration Directive 2002/44/EC is available at [www.stihl.com/vib](http://www.stihl.com/vib).

### 20.4 REACH

REACH is an EC regulation and stands for the Registration, Evaluation, Authorisation and Restriction of Chemical substances.

For information on compliance with the REACH regulation see [www.stihl.com/reach](http://www.stihl.com/reach).

## 21 Combinations of Cutting Attachments, Deflectors and Carrying Systems

### 21.1 Combinations of Cutting Attachments, Deflectors and Carrying Systems

#### FSA 90

Cutting Attachment	Deflector	Carrying System
Mowing head with 2.4 mm diameter "round, quiet" nylon line: – AutoCut 25-2 mowing head – DuroCut 20-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head  Mowing head with 2.7 mm diameter "round, quiet" nylon line: – AutoCut 25-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head	– Deflector for mowing heads	– Shoulder strap – Full harness – STIHL AR battery with hip padding – "AP belt bag with connecting cable" together with shoulder strap – Carrying system with built-in "AP belt bag with connecting cable" together with hip padding
– Grass cutting blade 230-2 – Grass cutting blade 230-4 – Grass cutting blade 230-8 – Grass cutting blade 260-2	– Deflector for metal cutting attachments	

**FSA 90 R**

Cutting Attachment	Deflector	Barrier Bar	Carrying System
Mowing head with 2.4 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – DuroCut 20-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head  Mowing head with 2.7 mm diameter “round, quiet” nylon line: – AutoCut 25-2 mowing head – SuperCut 20-2 mowing head – PolyCut 20-3 mowing head	– Deflector for mowing heads	– optional	– Shoulder strap – Full harness – STIHL AR battery with hip padding – “AP belt bag with connecting cable” together with shoulder strap – Carrying system with built-in “AP belt bag with connecting cable” together with hip padding
– Grass cutting blade 230-2 – Grass cutting blade 230-4 – Grass cutting blade 230-8 – Grass cutting blade 260-2	– Deflector for metal cutting attachments	– mandatory	

## 22 Spare Parts and Accessories

### 22.1 Spare Parts and Accessories

**STIHL**® These symbols identify original STIHL replacement parts and original STIHL accessories.

STIHL recommends the use of original STIHL replacement parts and accessories.

Original STIHL replacement parts and original STIHL accessories are available from STIHL servicing dealers.

## 23 Disposal

### 23.1 Disposing of Trimmer and Battery

Contact your STIHL servicing dealer for information on disposal.

- ▶ Dispose of the trimmer, deflector, cutting attachment, battery, charger, accessories and packaging in accordance with local regulations and environmental requirements.

## 24 EC Declaration of Conformity

### 24.1 STIHL FSA 90, FSA 90 R Trimmers

ANDREAS STIHL AG & Co. KG  
Badstrasse 115  
D-71336 Waiblingen  
Germany

declare in exclusive responsibility that

- Category: Cordless electric trimmer
- Make: STIHL
- Model: FSA 90, FSA 90 R

- Serial identification: 4863

conforms to the relevant provisions of Directives 2011/65/EU, 2006/42/EC, 2014/30/EU and 2000/14/EC and has been developed and manufactured in compliance with the following standards in the versions valid on the date of production: EN 55014-1, EN 55014-2, EN 60335-1 and EN ISO 12100 taking EN 50636-2-91 into account.

The measured and guaranteed sound power levels were determined according to Directive 2000/14/EC, Annex V.

- Measured sound power level: 92 dB(A)
- Guaranteed sound power level: 94 dB(A)

Technical documents are deposited at ANDREAS STIHL AG & Co. KG Produktzulassung (Product Licensing).

The year of manufacture, country of manufacture and serial number are applied to the trimmer.

Done at Waiblingen, 01.03.2017

ANDREAS STIHL AG & Co. KG



Thomas Elsner, Director Product Management and Services